SEQUENCE LISTING

<110> Evans, Thomas C.
Pradhan, Sriharsa

<120> Organellar Targeting of RNA and its Use in the Interruption of Environmental Gene Flow

<130> NEB-211-US

<140> 10/698,630
<141> 2003-10-31

<150> 60/423,341
<151> 2002-11-01

<160> 50

<170> PatentIn version 3.2

<210> 1
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<212> RNA
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<223> Tetrahymena thermophila fused with Aequorea victoria

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<222> (1)..(44)
<223> n is a, c, g, or u

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<223> n is a, c, g, or u

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aguuaucagg caugcaccug guagcuaguc uuuaaaccaa uagauugcau cgguuuaaaa 120

ggcaagaccg ucaaauugcg ggaaaggggu caacagccgu ucaguaccaa gucucagggg 180

aaacuuugag auggccuugc aaaggguaug guaauaagcu gacggacaug guccuaacca 240

cgcagccaag uccuaaguca acagaucuuc uguugauaug gaugcaguuc acagacuaaa 300

ugucggucgg ggaagaugua uucuucucau aagauauagu cggaccucuc cuuaauggga 360

gcuagcggau gaagugaugc aacacuggag ccgcugggaa cuaauuugua ugcgaaagua 420

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<210> 2
<211> 64
<212> RNA
<213> Aequorea victoria

<220>
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<223> n is a, c, g, or u

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augacaaaca aaagaauaga nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60

nnnn 64

<210> 3
<211> 247
<212> DNA
<213> avocado sunblotch viroid

<400> 3
tttattagaa caagaagtga ggatatgatt aaactttgtt tgacgaaacc aggtctgttc 60

cgactttccg actctgagtt tcgacttgtg agagaaggag gagtcgtggt gaacttttat 120

taaaaaaatt agttcactcg tcttcaatct cttgatcact tcgtctcttc agggaaagat 180

gggaagaaca ctgatgagtc tcgcaaggtt tactcctcta tcttcattgt ttttttacaa 240

aatcttg 247

<210> 4
<211> 1069
<212> DNA
<213> unknown

<220>
<223> Fusion construct of avocado sunblotch viroid, Nicotiana tabacum and Aequorea victoria

<400> 4
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cgactttccg actctgagtt tcgacttgtg agagaaggag gagtcgtggt gaacttttat 120

taaaaaaatt agttcactcg tcttcaatct cttgatcact tcgtgctagc atgtatttgg 180

caaatcaaat accatggtct aataatcaaa cattctgatt agttgataat attagtatta 240

gttggaaatt ttgtgaaaga ttcctatgaa aagtttcatt aacacggaat tcgtgtcgag 300

tagaccttgt tgttgtgaga attcttaatt catgagttgt agggagggat ttatgagtaa 360

aggagaagaa cttttcactg gagttgtccc aattcttgtt gaattagatg gtgatgttaa 420

tgggcacaaa ttttctgtca gtggagaggg tgaaggtgat gcaacatacg gaaaacttac 480

ccttaaattt atttgcacta ctggaaaact acctgttcca tggccaacac ttgtcactac 540

tttctcttat ggtgttcaat gcttttcaag atacccagat catatgaagc ggcacgactt 600

cttcaagagc gccatgcctg agggatacgt gcaggagagg accatctctt tcaaggacga 660

cgggaactac aagacacgtg ctgaagtcaa gtttgaggga gacaccctcg tcaacaggat 720

cgagcttaag ggaatcgatt tcaaggagga cggaaacatc ctcggccaca agttggaata 780

caactacaac tcccacaacg tatacatcac ggcagacaaa caaaagaatg gaatcaaagc 840

taacttcaaa attagacaca acattgaaga tggaagcgtt caactagcag accattatca 900

acaaaatact ccaattggcg atggccctgt ccttttacca gacaaccatt acctgtccac 960

acaatctgcc ctttcgaaag atcccaacga aaagagagac cacatggtcc ttcttgagtt 1020

tgtaacagct gctgggatta cacatggcat ggatgaacta tacaaataa 1069

<210> 5
<211> 1069
<212> DNA
<213> unknown

<220>
<223> Fusion construct of avocado sunbotch viroid, Nicotiana tabacum and Aequorea victoria

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tcaatctctt gatcacttcg tctcttcagg gaaagatggg aagaacactg atgagtctcg 120

caaggtttac tcctctatct tcattgtttt tttacaaaat cttggctagc atgtatttgg 180

caaatcaaat accatggtct aataatcaaa cattctgatt agttgataat attagtatta 240

gttggaaatt ttgtgaaaga ttcctatgaa aagtttcatt aacacggaat tcgtgtcgag 300

tagaccttgt tgttgtgaga attcttaatt catgagttgt agggagggat ttatgagtaa 360

aggagaagaa cttttcactg gagttgtccc aattcttgtt gaattagatg gtgatgttaa 420

tgggcacaaa ttttctgtca gtggagaggg tgaaggtgat gcaacatacg gaaaacttac 480

ccttaaattt atttgcacta ctggaaaact acctgttcca tggccaacac ttgtcactac 540

tttctcttat ggtgttcaat gcttttcaag atacccagat catatgaagc ggcacgactt 600

cttcaagagc gccatgcctg agggatacgt gcaggagagg accatctctt tcaaggacga 660

cgggaactac aagacacgtg ctgaagtcaa gtttgaggga gacaccctcg tcaacaggat 720

cgagcttaag ggaatcgatt tcaaggagga cggaaacatc ctcggccaca agttggaata 780

caactacaac tcccacaacg tatacatcac ggcagacaaa caaaagaatg gaatcaaagc 840

taacttcaaa attagacaca acattgaaga tggaagcgtt caactagcag accattatca 900

acaaaatact ccaattggcg atggccctgt ccttttacca gacaaccatt acctgtccac 960

acaatctgcc ctttcgaaag atcccaacga aaagagagac cacatggtcc ttcttgagtt 1020

tgtaacagct gctgggatta cacatggcat ggatgaacta tacaaataa 1069

<210> 6
<211> 1069

<212> DNA
<213> unknown

<220>
<223> Fusion construct of avocado sunblotch viroid, Nicotiana tabacum and Aequorea victoria

<400> 6
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attgtttttt tacaaaatct tgtttattag aacaagaagt gaggatatga ttaaactttg 120

tttgacgaaa ccaggtctgt tccgactttc cgactctgag tttcgctagc atgtatttgg 180

caaatcaaat accatggtct aataatcaaa cattctgatt agttgataat attagtatta 240

gttggaaatt ttgtgaaaga ttcctatgaa aagtttcatt aacacggaat tcgtgtcgag 300

tagaccttgt tgttgtgaga attcttaatt catgagttgt agggagggat ttatgagtaa 360

aggagaagaa cttttcactg gagttgtccc aattcttgtt gaattagatg gtgatgttaa 420

tgggcacaaa ttttctgtca gtggagaggg tgaaggtgat gcaacatacg gaaaacttac 480

ccttaaattt atttgcacta ctggaaaact acctgttcca tggccaacac ttgtcactac 540

tttctcttat ggtgttcaat gcttttcaag atacccagat catatgaagc ggcacgactt 600

cttcaagagc gccatgcctg agggatacgt gcaggagagg accatctctt tcaaggacga 660

cgggaactac aagacacgtg ctgaagtcaa gtttgaggga gacaccctcg tcaacaggat 720

cgagcttaag ggaatcgatt tcaaggagga cggaaacatc ctcggccaca agttggaata 780

caactacaac tcccacaacg tatacatcac ggcagacaaa caaaagaatg gaatcaaagc 840

taacttcaaa attagacaca acattgaaga tggaagcgtt caactagcag accattatca 900

acaaaatact ccaattggcg atggccctgt ccttttacca gacaaccatt acctgtccac 960

acaatctgcc ctttcgaaag atcccaacga aaagagagac cacatggtcc ttcttgagtt 1020

tgtaacagct gctgggatta cacatggcat ggatgaacta tacaaataa 1069

<210> 7
<211> 52
<212> DNA
<213> Tetrahymena thermophila

<400> 7
gccatggaac tcgagcccgc tcttccaaaa gttatcaggc atgcacctgg ta 52

<210> 8
<211> 53
<212> DNA
<213> Tetrahymena thermophila

<400> 8
gattgcatcg gtttaaaagg caagaccgtc aaattgcggg aaaggggtca aca 53

<210> 9
<211> 52
<212> DNA
<213> Tetrahymena thermophila

<400> 9
tcaggggaaa ctttgagatg gccttgcaaa gggtatggta ataagctgac gg 52

<210> 10
<211> 53
<212> DNA
<213> Tetrahymena thermophila

<400> 10
gccaagtcct aagtcaacag atcttctgtt gatatggatg cagttcacag act 53

<210> 11
<211> 53
<212> DNA
<213> Tetrahymena thermophila

<400> 11
atgtattctt ctcataagat atagtcggac ctctccttaa tgggagctag cgg 53

<210> 12
<211> 52
<212> DNA
<213> Tetrahymena thermophila

<400> 12
gagccgctgg gaactaattt gtatgcgaaa gtatattgat tagttttgga gt 52

<210> 13
<211> 53
<212> DNA
<213> Tetrahymena thermophila

<400> 13
gctgcagagg cggccgccaa aggaccgaat gcgagtactc caaaactaat caa 53

<210> 14
<211> 53
<212> DNA
<213> Tetrahymena thermophila

<400> 14
ttagttccca gcggctccag tgttgcatca cttcatccgc tagctcccat taa 53

<210> 15
<211> 52
<212> DNA
<213> Tetrahymena thermophila

<400> 15
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<210> 16
<211> 53
<212> DNA
<213> Tetrahymena thermophila

<400> 16
ttgacttagg acttggctgc gtggttagga ccatgtccgt cagcttatta cca 53

<210> 17
<211> 52
<212> DNA
<213> Tetrahymena thermophila

<400> 17
ctcaaagttt cccctgagac ttggtactga acggctgttg acccctttcc cg 52

<210> 18
<211> 53
<212> DNA
<213> Tetrahymena thermophila

<400> 18
tttaaaccga tgcaatctat tggtttaaag actagctacc aggtgcatgc ctg 53

<210> 19
<211> 61
<212> DNA
<213> unknown

<220>
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<400> 19
catgcaccag gatttgtcgt gaggcctgag ttcagaccgg tgaattgaga acacggtaag 60

a 61

<210> 20
<211> 60
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

<400> 20
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<210> 21
<211> 30
<212> DNA
<213> unknown

<220>
<223> primer

<400> 21
ggcccatggg taaaggagaa gaacttttca 30

<210> 22
<211> 38
<212> DNA
<213> unknown

<220>
<223> primer

<400> 22
ggcaccggtt ttctacgata agagaaagta gtgacaag 38

<210> 23
<211> 30
<212> DNA
<213> unknown

<220>
<223> primer

<400> 23
ggcgaatgcg ggtgttcaat gcttttcaag 30

<210> 24
<211> 33
<212> DNA
<213> unknown

<220>
<223> primer

<400> 24
gaagcggccg cttatttgta tagttcatcc atg 33

<210> 25
<211> 49
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 25
tttattaaaa aaattagttc actcgtcttc aatctcttga tcacttcgt 49

<210> 26
<211> 49
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 26
ctaatttttt taataaaagt tcaccacgac tcctccttct ctcacaagt 49

<210> 27

<211> 39
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 27
gtctagaact tgtgagagaa ggaggagtcg tggtgaact 39

<210> 28
<211> 50
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 28
ggaagaacac tgatgagtct cgcaaggttt actcctctat cttcattgtt 50

<210> 29
<211> 40
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 29
ggctagccaa gattttgtaa aaaaacaatg aagatagagg 40

<210> 30
<211> 51
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 30
ctcatcagtg ttcttcccat ctttccctga agagacgaag tgatcaagag a 51

<210> 31
<211> 40
<212> DNA
<213> Nicotiana tabacum

<400> 31
gggctagcat gtatttggca aatcaaatac catggtctaa 40

<210> 32
<211> 52
<212> DNA
<213> Nicotiana tabacum

<400> 32
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<210> 33
<211> 52
<212> DNA
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<400> 33
tcgtgtcgag tagaccttgt tgttgtgaga attcttaatt catgagttgt ag 52

<210> 34
<211> 40
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<400> 34
ccgctcttca cataaatccc tccctacaac tcatgaatta 40

<210> 35
<211> 52
<212> DNA
<213> Nicotiana tabacum

<400> 35
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<210> 36
<211> 52
<212> DNA
<213> Nicotiana tabacum

<400> 36
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<210> 37
<211> 41
<212> DNA
<213> unknown

<220>
<223> primer

<400> 37
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<210> 38
<211> 31
<212> DNA
<213> unknown

<220>
<223> primer

<400> 38
ggctgcagga gagctcttat ttgtatagtt c 31

<210> 39

<211> 40
<212> DNA
<213> unknown

<220>
<223> primer

<400> 39
gggctagcgc tgctcttcca tggaatccct gacgttacaa 40

<210> 40
<211> 43
<212> DNA
<213> unknown

<220>
<223> primer

<400> 40
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<210> 41
<211> 61
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

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g 61

<210> 42
<211> 60
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

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<210> 43
<211> 27
<212> DNA
<213> unknown

<220>
<223> primer

<400> 43
ggcgaatgcg cgctatctgg tcgaggg 27

<210> 44
<211> 36

<212> DNA
<213> unknown

<220>
<223> primer

<400> 44
gaagcggccg caccggttta ggcaggcgta ctcatt 36

<210> 45
<211> 35
<212> DNA
<213> unknown

<220>
<223> primer

<400> 45
gggctagcgc tgctcttcca tggccaccgc cgccg 35

<210> 46
<211> 43
<212> DNA
<213> unknown

<220>
<223> primer

<400> 46
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<210> 47
<211> 61
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

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c 61

<210> 48
<211> 60
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

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<210> 49
<211> 31
<212> DNA

<213> unknown

<220>
<223> primer

<400> 49
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<210> 50
<211> 35
<212> DNA
<213> unknown

<220>
<223> primer

<400> 50
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